

NOV 13 2002

TECH CENTER 1500/2000

Subt. For, PTO-1449  INFORMATION DISCLOSURE IN AN APPLICATION  (Use several sheets if necessary)				Docket Number DIV-1460-15		Application Number 09/594,459		
				Applicant SHORT, Jay M.		Examiner PARK, HANKYEL		
				Filing Date 6/14/2000		Group Art Unit 1648		
Sheet	1	OF	3					

## U.S. Patent Documents

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	5,023,171	6/11/91	HO et al.			
	5,279,952	1/18/94	WU			
	5,498,531	3/12/96	JARRELL			
	6,096,548	8/1/00	STEMMER			
	6,117,679	9/12/00	STEMMER			
	6,291,158	9/18/01	WINTER et al.			

## Foreign Patent Documents

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	EP 0439182	7/31/91	EUROPE				
	WO 92/07075	4/30/92	WORLD				
	WO 93/03183	2/18/93	WORLD				
	EP 0552266	7/28/93	EUROPE				
	EP 0596918	5/18/94	EUROPE				
	WO 94/13804	6/23/94	WORLD				
	EP 0633944	1/18/95	EUROPE				
	WO 95/22625	8/24/95	WORLD				
	AU 703264	9/4/95	AUSTRALIA				
	WO 97/07205	2/27/97	WORLD				
	WO 97/35966	10/2/97	WORLD				
	AU 729505	10/17/97	AUSTRALIA				
	EP 0963434	12/15/99	EUROPE				
	WO 98/13485	4/2/98	WORLD				
	WO 98/27230	6/25/98	WORLD				
	AU 732146	6/25/98	AUSTRALIA				
	AU 724698	10/20/98	AUSTRALIA				
	EP 0911396	4/28/99	EUROPE				
	EP 1094108	4/25/01	EUROPE				
	EP 1103606	5/30/01	EUROPE				
Other Documents (Including Author, Title, Date Pertinent Pages, Etc.)							

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Sheet	2	OF	3		

TECH CENTER 1600/2900

A	Arnold F. H. and Moore J.C. Optimizing industrial enzymes by directed evolution. <i>Advances in Biochemical Engineering Biotechnology</i> . 1997; 58:1-14. Review.
B	Arnold F. H. When blind is better: protein design by evolution. <i>Nature Biotechnology</i> . 1998 July 16:617-618.
C	Campbell R. K. et al. Assembly and expression of a synthetic gene encoding the bovine glycoprotein hormone alpha-subunit. <i>Molecular and Cellular Endocrinology</i> . 1992;83:195-200.
D	Clackson T, et al. Making antibody fragments using phage display libraries. <i>Nature</i> . 1991 August 15 352(6336):624-628.
E	Cohen J. How DNA shuffling works. <i>Science</i> . 2001 Jul 13;293(5528):237.
F	Cramer A., et al. Molecular evolution of an arsenate detoxification pathway by DNA shuffling. <i>Nature Biotechnology</i> . 1997 May 15(5):436-438.
H	Cramer A., et al. DNA shuffling of a family of genes from diverse species accelerates directed evolution. <i>Nature</i> . 1998 Jan 15;391(6664):288-291.
I	Cramer A., et al. Improved green fluorescent protein by molecular evolution using DNA shuffling. <i>Nature Biotechnology</i> . 1996 Mar;14(3):315-319.
J	Cramer A., et al. Construction and evolution of antibody-phage libraries by DNA shuffling. <i>Nature Medicine</i> . 2(1):100-102 (Jan 1996).
K	Gram H., et al. In vitro selection and affinity maturation of antibodies from a naive combinatorial immunoglobulin library. <i>Proc. National. Acad. Sci.</i> 89(8):3576-80, (April, 1992).
L	Griffiths A. D., et al. Isolation of high affinity human antibodies directly from large synthetic repertoires. <i>EMBO Journal</i> . 1994, 13: 3245-3260.
M	Harlow P. H., et al. Construction of linker-scanning mutations using the polymerase chain reaction. <i>Methods in Molecular Biology</i> . 31:87-96 (1994).
N	Hayden M.A. and Mandecki W. Gene synthesis by serial cloning of oligonucleotides. <i>DNA</i> . 1988 Oct; 7(8):571-7.
O	Higuchi R., et al. A general method of in vitro preparation and specific mutagenesis of DNA fragments: study of protein and DNA interactions. <i>Nucleic Acids Res</i> 16(15):7351-67 (Aug, 1988).
P	Ho S.N., et al. Site-directed mutagenesis by overlap extension using the polymerase chain reaction. <i>Gene</i> 77:51-59, (Apr, 1989).
Q	Ho S.N., et al. DNA and Protein Engineering Using the Polymerase Chain Reaction. <i>DNA Protein Engineering Techniques</i> 2(2):50-55, (1990).
R	Imamura T., et al. Identification of the domain within fibroblast growth factor-1 responsible for heparin-dependence. <i>Biochimica et Biophysica Acta</i> . 1995 Apr 28;1266(2):124-30.
S	Joyce G.F. Directed molecular evolution. <i>Scientific America</i> . 267(6):90-7, (Dec, 1992).
T	Levichkin, et al. A new approach to construction of hybrid genes: homolog recombination method. <i>Molecular. Biology</i> . 29(5):572-577 (July-Aug 1995).
U	Melnikov A. and Youngman P.J. Random mutagenesis by recombinational capture of PCR products in <i>Bacillus subtilis</i> and <i>Acinetobacter calcoaceticus</i> . <i>Nucleic Acids Res</i> . 1999 Feb 15;27(4):1056-62.
V	Pompon D. and Nicolas A. Protein engineering by cDNA recombination in yeasts: Shuffling of mammalian cytochrome p450 functions. <i>Gene</i> 83(1):15-24 (Nov, 1989).
W	Punnonen J. Molecular breeding of allergy vaccines and antiallergic cytokines. <i>Int Arch Allergy Immunol</i> . 2000 Mar;121(3):173-82. Review.

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TECH CENTER 1600/2600

X	Raillard S., et al. Novel enzyme activities and functional plasticity revealed by recombining highly homologous enzymes. <i>Chemistry Biology</i> . 2001 Sep;8(9):891-898.
Y	Saiki R.K., et al. Enzymatic amplification of $\beta$ -globin genomic sequences and restriction site analysis for diagnosis of sickle cell anemia. <i>Science</i> 230(4732):1350-1354, (Dec, 1985).
Z	Shao Z., et al. Random-priming in vitro recombination: an effective tool for directed evolution. <i>Nucleic Acids Res.</i> 1998 Jan 15;26(2):681-3.
AA	Sikorski R.S. and Boeke J.D. In vitro mutagenesis and plasmid shuffling: from cloned gene to mutant yeast. <i>Methods Enzymol.</i> 194:302-318 (1991).
BB	Stemmer W.P., et al. Single-step assembly of a gene and entire plasmid from large numbers of oligodeoxyribonucleotides. <i>Gene</i> . 1995 Oct 16;164(1):49-53.
CC	Weber H. and Weissmann C. Formation of genes coding for hybrid proteins by recombination between related, cloned genes in E.coli. <i>Nucleic Acids Res.</i> 11(16):5661-69 (Aug, 1983).
DD	Zhang J.H., et al. Directed evolution of a fucosidase from a galactosidase by DNA shuffling and screening. <i>Proc National Academy Science U.S. A.</i> 1997 Apr 29;94(9):4504-9.
EE	Zoller M.J. New recombinant DNA methodology for protein engineering. <i>Current Opinion Biotechnology</i> 1992. 3(4):348-54. Review.
EXAMINER	DATE CONSIDERED 3/7/03
EXAMINER: Initial if citation is considered, whether or not citation is in conformance with MPEP § 609: Draw Line through citation if not conformance and not considered. Include copy with next communication to applicant.	

